



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 82-4-L64-840-(L40)-EM10W-DIM-UNV_(EMER MODE).IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from BALLABS TEST NO. 20804.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 01-19-2024
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 4-28 LED 22" ARRAYS 4' INDUSTRIAL LUMINAIRE
 [MORE] WHITE REFLECTOR w/OPEN BOTTOM
 [LUMCAT] 82-4-L64-840-(L40)-EM10W-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1680
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	168
Total Luminaire Watts	10
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.34
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.44
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	1.08 ft
Luminous Height	0.00 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1607	1582	1561
55	1569	1555	806
65	1473	802	787
75	1171	260	242
85	405	202	90

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	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	627.368	627.368	627.368	627.368	627.368
5	637.368	626.316	620.789	619.737	620.000
10	630.526	619.737	614.211	613.158	613.158
15	620.000	608.947	603.421	617.632	627.368
20	604.737	593.684	605.526	601.316	611.053
25	583.684	574.737	588.158	566.316	566.842
30	560.526	553.947	546.579	543.421	542.895
35	531.053	543.947	515.789	518.421	515.789
40	493.947	518.421	487.632	485.263	481.842
45	457.632	456.053	450.526	445.000	444.737
50	411.316	407.368	405.263	393.421	250.263
55	362.632	361.579	359.211	187.895	186.316
60	305.789	310.526	165.263	161.842	161.842
65	250.789	249.737	136.579	131.842	133.947
70	185.263	187.368	105.263	36.579	28.684
75	122.105	74.211	27.105	25.000	25.263
80	62.895	32.105	19.474	16.316	15.263
85	14.211	11.842	7.105	3.684	3.158
90	0.526	5.000	1.842	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	232.54	N.A.	13.80
0-30	498.48	N.A.	29.70
0-40	826.89	N.A.	49.20
0-60	1437.25	N.A.	85.50
0-80	1668.09	N.A.	99.30
0-90	1680.11	N.A.	100.00
10-90	1620.76	N.A.	96.50
20-40	594.36	N.A.	35.40
20-50	938.13	N.A.	55.80
40-70	779.09	N.A.	46.40
60-80	230.84	N.A.	13.70
70-80	62.11	N.A.	3.70
80-90	12.02	N.A.	0.70
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1680.11	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	59.36
10-20	173.18
20-30	265.95
30-40	328.41
40-50	343.77
50-60	266.58
60-70	168.73
70-80	62.11
80-90	12.02
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	63
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56	54
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	47
6	72	59	51	44	70	58	50	44	56	49	44	55	48	43	53	48	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	45	39	34	32
9	58	45	37	32	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	34	28	40	33	28	39	33	28	38	32	28	26

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UGR TABLE - CORRECTED

Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

Room Size UGR Viewed Crosswise

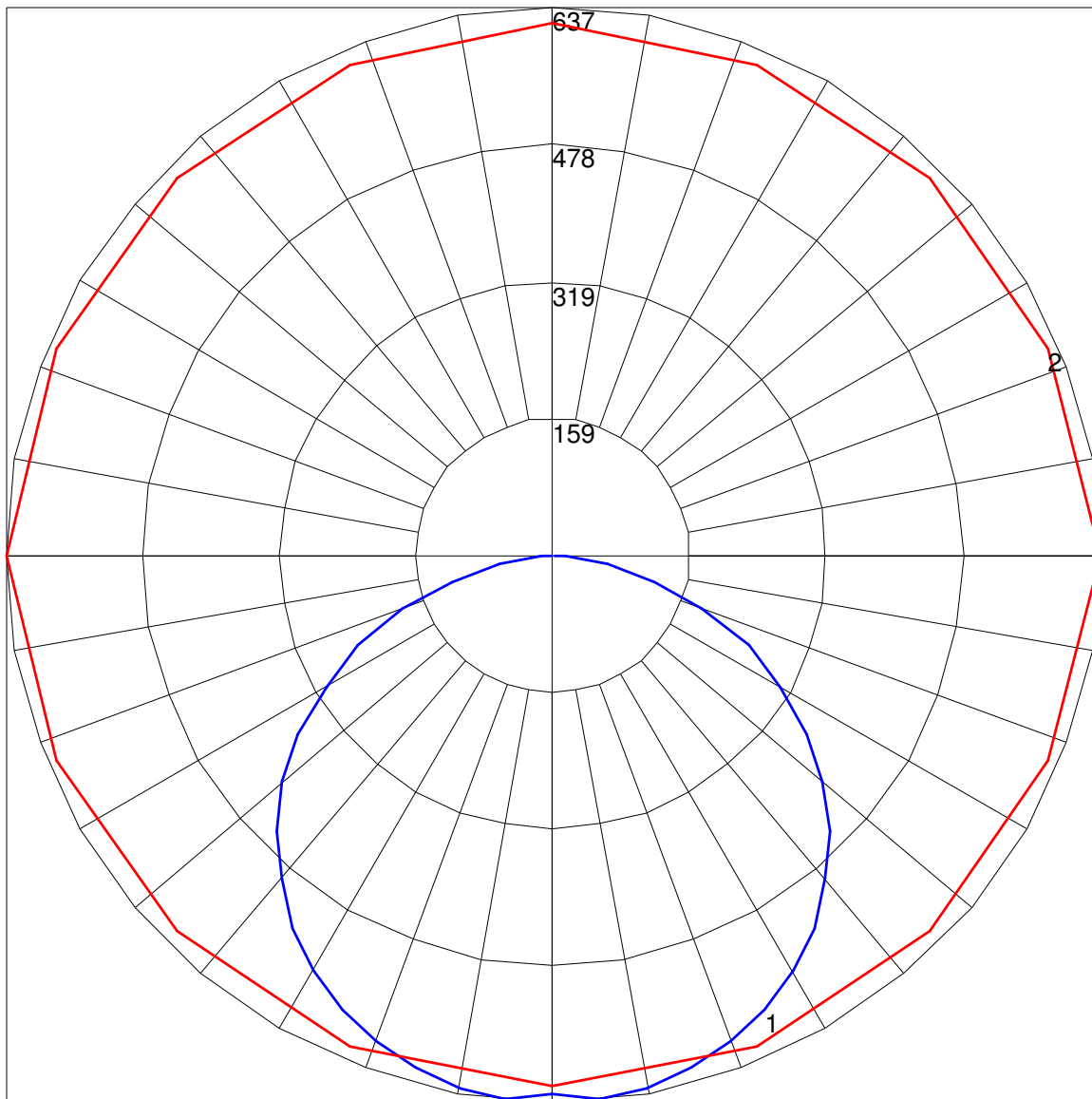
X=2H	Y=2H	14.5	16.0	14.8	16.3	16.7	9.9	11.5	10.3	11.8	12.1
	3H	16.2	17.6	16.6	18.0	18.3	10.5	11.9	10.9	12.3	12.6
	4H	16.7	18.0	17.1	18.3	18.7	10.6	11.9	11.0	12.3	12.7
	6H	17.0	18.2	17.4	18.5	18.9	10.7	11.9	11.1	12.3	12.7
	8H	17.0	18.2	17.5	18.6	19.0	10.7	11.9	11.1	12.2	12.6
	12H	17.0	18.1	17.5	18.5	18.9	10.7	11.8	11.1	12.2	12.6

UGR Viewed Endwise

4H	2H	14.5	15.9	14.9	16.2	16.6	10.6	12.0	11.0	12.3	12.7
	3H	16.6	17.6	17.0	18.0	18.4	11.4	12.4	11.8	12.8	13.2
	4H	17.1	18.0	17.5	18.4	18.9	11.5	12.4	11.9	12.9	13.3
	6H	17.4	18.2	17.8	18.7	19.1	11.6	12.4	12.0	12.9	13.3
	8H	17.5	18.3	17.9	18.7	19.2	11.6	12.4	12.1	12.8	13.3
	12H	17.5	18.2	18.0	18.7	19.2	11.6	12.3	12.1	12.8	13.2
8H	4H	17.0	17.8	17.5	18.2	18.7	11.8	12.6	12.2	13.0	13.5
	6H	17.3	18.0	17.8	18.5	19.0	11.9	12.6	12.4	13.1	13.5
	8H	17.5	18.0	18.0	18.6	19.0	12.0	12.5	12.5	13.1	13.5
	12H	17.5	18.0	18.0	18.5	19.1	12.0	12.5	12.5	13.0	13.5
12H	4H	17.0	17.7	17.5	18.2	18.6	11.8	12.5	12.3	13.0	13.5
	6H	17.3	17.9	17.9	18.4	18.9	12.0	12.5	12.5	13.0	13.6
	8H	17.4	18.0	18.0	18.5	19.0	12.0	12.5	12.5	13.0	13.6

Maximum UGR = 19.2

POLAR GRAPH



Maximum Candela = 637.368 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)